BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company To Revise Its Electric Marginal Costs, Revenue Allocation, and Rate Design. (U 39 M)	Application 06-03-005 (Filed March 2, 2006)

THE DIVISION OF RATEPAYER ADVOCATES' POST-WORKSHOP COMMENTS IN RESPONSE TO THE ASSIGNED COMMISSIONER'S RULING ON DYNAMIC PRICING ISSUES

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I. INTRODUCTION

Pursuant to the August 22, 2007 Assigned Commissioner Ruling ("ACR") requesting comments on dynamic pricing issues, the Division of Ratepayer Advocates ("DRA") hereby provides these post-workshop comments. DRA found the workshop on November 5 and 6 to be worthwhile and well conducted.

For DRA, a major conclusion that arose from the workshop is that the Commission is at a crossroads where a significant choice is presenting itself that cuts across both the dynamic pricing and resource adequacy proceedings. The choice is between whether or not to continue to pursue a procurement policy that may be overly cautious. While this approach leads to stable market prices, such stability will not produce much demand response. Having more demand response may require relaxing the resource adequacy requirements ("RAR") to allow more price volatility. More demand response also would require the availability of dynamic tariffs and enabling technology, both of which are still in the future.

Ultimately, it may be desirable for customers to have some role in making these procurement choices through the tariffs into which they enroll. Accordingly, the planning reserve margin ("PRM"), and possibly other forward contracting provisions of the RAR, could be relaxed for customers who choose to expose part or all of their load to dynamic prices. Granted, the RAR is out of the scope of this proceeding. But the workshop moderator stated that a decision from this proceeding could recommend that the issue of relaxing the RAR for customers on dynamic tariffs be taken up in the RAR proceedings. Alternatively, it could be taken up in the new OIR on the PRM.

II. THE FORK IN THE ROAD

The Commission's current wholesale procurement policy is partly oriented towards preventing another energy crisis such as what occurred in 2001. Utilities and other load serving entities ("LSEs") now are required to forward contract for capacity one year in advance for 95% of their summer peak load. Additionally, they are to procure enough capacity to provide a planning reserve margin ("PRM") equal to 15% of their entire peak load. Utilities also forward contract a large percentage of their energy requirements, leaving only a small percentage to be met through the spot or imbalance markets. Discussions are occurring about replacing this "LSE-based" approach to resource adequacy with a centralized capacity market, and the Commission is planning on making a decision on this matter early next year.

The result of all of this is a high degree of price certainty. Indeed, there was much consensus amongst the parties in this proceeding that this approach to RAR has led to relatively low and non-volatile real-time spot energy prices.[1] This is not all bad. Some would argue that the cost of performing a large amount of forward contracting is worth the benefit of price stability. In fact, SCE has argued,

[1] The CAISO also discussed the fact that spot prices are relatively flat in its Annual Report on Market Issues and Performance (April 2007).

in its opening comments, that capacity contracts make up only 10% of its total revenue requirement, and only a small percentage of that is dedicated to the PRM.[2] Furthermore, elasticity studies have shown that a fairly large amount of price volatility is required to invoke a significant amount of demand response,[3] leading to the question of whether we want that much volatility.

Yet a legitimate question can be asked about whether overall ratepayer costs could be reduced with a more flexible approach to the PRM and more extensive use of demand response. Accordingly, the Utility Reform Network ("TURN") has proposed different PRMs for different customers. On page 8 of its opening comments, it stated:

> This structure could be modified such that LSEs could procure to a lower PRM for those customers who opt for a CPP tariff – perhaps 10% but in any event no lower than the 7% required to maintain system *operating* reserves. The CPP customers would therefore pay a lower base rate than the fully hedged customers, reflecting the smaller amount of capacity that the LSE needs to procure in order to serve them. In exchange, the CPP customers would bear the risk of paying higher CPP/CAISO scarcity prices when such events occur.

At the workshop, TURN augmented this proposal by suggesting that customers be allowed to voluntarily elect, through a capacity reservation charge ("CRC"), how much of their load they do not want to expose to the California Independent System Operator ("CAISO") scarcity price.[4]

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[2] SCE Opening Comments, page 11.

[3] This is not to say that some demand response cannot be obtained by "tweaking" the rate design administratively to recover more costs in critical peak hours.

[4] The CRC is a rate element recently introduced into SDG&E's CPP tariff for large customers. It is in lieu of a demand charge but is based on the same marginal generation capacity costs used to develop the demand charge. It would apply only to that percentage of a customer's load not subject to a CPP rate. The CPP rate itself recovers the marginal generation capacity costs not recovered through the CRC.

III. CRITICAL PEAK PRICING

DRA believes that TURN's critical peak pricing ("CPP") proposal offers promise and may be a good first step towards making rate design more dynamic. But a major complication with the proposal is that setting the planning reserve margin *equal* to the desired operating margin may not result in the desired operating margin. This is because contingencies may occur in real time that prevent the operating reserve from being met. This problem of the operating reserved going below the CAISO requirement is not insurmountable, but careful planning would be necessary for it to work as intended.

It is important to remember that a planning reserve margin is set on a forward basis, whereas the operating margin must be maintained in real time. Generally, a planning reserve margin must be somewhat higher than the desired operating margin because the planned resources might not all be available if unforeseen outages occur. Also, the load might be higher than was anticipated. It is not clear whether the probability of such contingencies occurring is high enough to necessitate a planning reserve approximately double the desired operating reserve, as is currently the case. But that is a discussion that should take place in the new OIR on the PRM.

Selectively reducing the PRM for load taking service on a CPP tariff brings up the question of whether part of that load should be interrupted[5] if a contingency prevents meeting the 7% operating reserve. In theory, up to 8% of that load could be interrupted since that would produce the same effect as if the full 15% PRM had been provided for and none of that load had been interrupted. Clearly, removing 8% of the demand from the system in these conditions is equivalent to having provided 8% more supply to begin with, all else being equal.

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[5] If 8% of the load were subject to such interruption, a separate interruptible credit would not be paid on that load because the cost savings from not covering this load with the RAR are already flowed through to these customers in the form of lower average energy prices and no demand charges or CRC.

Interrupting *more* than 8% of this load might be unfair since not providing the 15% PRM might not be the sole reason for the operating reserves dropping below 7%. Indeed, whether even as much as 8% of the load would have to be interrupted also is an open question. Presumably, imposing scarcity pricing on these customers will result in some load reduction. But the actual amount of load reduction induced by scarcity prices is difficult to predict at this time. It should also be noted that the scarcity price will initially be administratively determined and may not be high enough to truly ration the available supply to the demand. While this rationing effect is the theoretical function of a scarcity price, such a price would have to be determined by the market for that to happen. This approach would involve lifting the price caps and is not being considered at this time.

Indeed, if the scarcity price were insufficient to cause an 8% reduction of system load, and the CPP load were not interrupted, other customers *not* on dynamic tariffs would suffer the potential consequences of supply shortfalls. Whatever is set up, this free rider problem of CPP load benefiting from the PRM carried by load not on dynamic tariffs would need to be prevented. The good news is that reducing the PRM on a portion of the load of few customers will probably still result in adequate supply *most* of the time. Of course, the bad news is that supply may still be so reliable that TURN's proposal will result in very little increase in price volatility. To achieve more price volatility, a more aggressive approach may be required, as discussed in the next section. But, as a first step, TURN's proposal should be revisited after scarcity pricing is implemented in 2009.

IV. REAL TIME PRICING

It was obvious from the workshop that a number of parties representing large commercial and industrial customers favor moving to RTP fairly expeditiously. Furthermore, the workshop moderator offered a proposal that PG&E be required to present an RTP tariff for large customers in its test year 2011

GRC. Given that MRTU will be implemented in the spring of 2008, this will provide the 12 – 18 month experience with MRTU that several parties desire before its results are used in dynamic pricing.

The main problem with RTP is that the current real time spot energy market price is very much influenced by the fact that a very high percentage of the utility's load is currently hedged through forward contracting. As indicated above, many parties pointed out in their comments that the current RTP is artificially low and flat across time periods. The utilities offering a retail price like this will only encourage more energy consumption and the production of more greenhouse gases, which would be contrary to other State policies. To prevent this unintended effect, the RTP would have to be adjusted incorporate the cost of forward contracting. But doing so invites revenue reconciliation problems. As PG&E explained in the workshop, implementing this adjustment would require a very accurate forecast of the future RTPs, which is currently not available. Perhaps an *adder* to the RTP rather than a *multiplier* would overcome this problem.[6] But an adder might be so high that it would dominate and mute the RTP, especially in the off-peak hours.

These administrative adjustments described by PG&E at the workshop appeared to be met by some skepticism by some parties. But if the unadjusted wholesale spot market RTP is to be *directly* reflected in retail prices, then the load on that tariff logically should be served *entirely* from the wholesale real-time spot or imbalance market. Indeed, this would be a radical extension of the TURN CPP proposal, where forward contracting would only be reduced for the PRM. But such a radical extension might create a market that is more dynamic and volatile, where price moderates the load to meet the available capacity.

[6] Developing a scalar that could be multiplied by the RTP would require knowing the RTP in advance. Whereas, an adder simply could be developed by dividing the cost of forwarding contracting by the number of hours in the year.

Yet the resulting volatile and unpredictable RTP might not be the kind of RTP that the large customer groups that favor RTP are seeking. Also, having a relatively larger amount of the demand served only through the spot market might lead to an overall lower level of supply reliability, which could indirectly impact all customers unless all of this load were curtailable. Furthermore, generation suppliers require forward contracting to finance their projects. Thus, reducing the amount of forward contracting relative to what currently exists could reduce the number of new market entrants, potentially producing supply shortfalls in the future.

Nevertheless, if the Commission wishes to pursue such an RTP concept, a tariff could be designed where customers would be allowed to cover part of their load with such an RTP. The rest would be under non-dynamic tariffs and subject to a CRC, such as with SDG&E's CPP tariff.[7] Given that this tariff would greatly expose customers to the uncertainties of the market, it would make sense to only offer it on a voluntary opt-in basis. Also, since the utility's RAR cannot be reduced instantaneously, it would be prudent to limit the amount of load that could opt into such an RTP rate every year, allowing it to grow as the amount of forward contracting is reduced. Switching rules would have to be established to prevent customers from immediately returning to a flat rate tariff when an emergency results in more volatile pricing than customers anticipated.

Even with these safeguards in place, if a relatively small amount of the load goes on to RTP, it will indirectly benefit from the fact that most of the utility load is hedged. Of course, this might coax more customers onto RTP, resulting in a more meaningful level of price volatility. Perhaps, over time, the balance between the variability and the level of prices would reflect the value that customers place

[7] Alternatively, it could merely be subject to the otherwise applicable tariff including demand charges, which unlike the CRC, are seasonally differentiated. This would be simpler and more accurately reflect the costs that otherwise would be recovered through a CRC.

on their discretionary usage. This would be a good outcome, but reaching such an equilibrium may be easier said than done.

Finally, one popular form of RTP discussed in the workshop is a two-part RTP where RTP is only charged to incremental load. While it is intuitively appealing to only charge the marginal price to marginal load, determining what load is truly marginal appears to be a challenging problem. There was much discussion in the workshops about the difficulties of administratively calculating a customer reference level. DRA believes that the only way out of this dilemma is to allow the customer to choose its own CRC as is done in SDG&E's CPP tariff. The customer should be allowed to determine how much load it wants to put at risk in the real-time markets and bear the consequences of that choice. These consequences include facing extremely high RTPs and the possibility of having their load curtailed in times of capacity shortfall.

V. RESIDENTIAL RATE DESIGN

There is a genuine question of when and how dynamic pricing should be introduced into the residential class. In the short-run, the Assembly Bill ("AB") 1X constraints cannot be legally overridden by this Commission. Yet, even after AB 1X expires, the residential baseline program will still exist, which specifies that a basic amount of gas and electricity are necessities, for which a low affordable rate is desirable. For electric customers, the baseline quantity is specified as 50 to 60 percent of average residential consumption for a given baseline area.

Thus an affordable baseline rate must be offered for this basic level of usage, but more flexibility would exist above this level of usage. Because of these statutes, in the short term, DRA supports limited experimenting with Peak Time Rebates ("PTR") for residential customers. DRA supports experimenting and evaluating how a PTR program can work as a demand response program even though DRA also has concerns about the existence of free riders on such a program. To reduce the potential for free riders, DRA supports a two level PTR program where customers with enabling technology receive higher incentive payments. PG&E will also be offering voluntary TOU and CPP rate options for residential customers.

DRA sees value, in the 2011 GRC, for PG&E to consider a new schedule E-1 tariff where usage beyond tier 3 is time differentiated. This proposal has some appeal on a theoretical basis, but it should undergo proper scrutiny in the rate design phase of a GRC. It should be kept in mind that TOU or CPP rates would need to be designed to collect the revenue requirement that is currently collected in tier 3, 4, and 5 rates. And any TOU rate would need to be at least the level of the tier 2 rate. In a GRC, rates could be designed with the proper revenue requirement and projected sales. It is quite possible that the CPP rate or summer on peak rate would be quite high. Thus any such proposal will require careful analysis of bill impacts and possible revenue shortfalls. Any proposal should be carefully designed to both realize program goals of demand reduction but also limit the number of customers who experience large increases in their bills.

As for the post AB 1X world, DRA proposed a simplification of the default residential tariff in its opening comments where usage above baseline would be subject to an energy surcharge and a capacity surcharge.[8] The energy surcharge would apply to all usage above baseline and the capacity surcharge would only apply to summer on-peak usage. It might be possible to eventually make that capacity surcharge something that is avoidable by customers being willing to face truly dynamic rates (based on real time and CAISO scarcity prices) for a portion of their load above baseline levels. Limiting dynamic pricing to above baseline levels makes sense because it is uncertain whether the home area networks that are currently being discussed in the AMI proceedings will ever be cost effective for customers whose usage is regularly below the baseline level.

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[8] See pp. DRA Opening Comments, 22-23.

Finally, the issue came up in the workshop of whether a utility should offer *both* a CPP and PTR program to the same customer group. DRA would support doing so as long as the same customer isn't allowed to participate in both programs. PG&E's current CPP rate design increases the effective rate during the CPP period and provides an off-peak credit to compensate for that. It would be "double dipping" for a customer to both collect the off-peak credit while receiving a PTR credit. In fact, the CPP rate (on which the off-peak credit is based) and the PTR credit are both based on the same marginal generation capacity cost.

As long as this problem is avoided, there are some customers who might benefit more from CPP than from PTR. These are customers with load factors that are higher than the class average and who essentially subsidize lower load factor customers through their existing rates. These customers should be given the opportunity to avoid this subsidy. These same customers may not be able to reduce their load relative to their own historic consumption during the PTR reference period because they do not have discretionary air conditioning load.

VI. CONCLUSION

There are some exciting opportunities for linking wholesale procurement and retail pricing in a rational way. This kind of linkage is necessary for a truly dynamic wholesale market that will support new capacity investment and promote meaningful demand response. But there are many dangers to relaxing the RAR too quickly and before these linkages can be refined. The risk is a return to another energy crisis such as occurred in 2001. TURN's warning at the end of the workshop bears some careful consideration. According to TURN, it is better to "do it right than to do it fast".

Another message that should be gleaned from the workshops is that true dynamic pricing must be a voluntary proposition. Forcing customers onto dynamic tariffs without any hedging options is not how real markets work. A properly functioning market provides customers the choice of how much price certainty and supply reliability they want. Then whatever choice they make must link back to wholesale procurement.

Respectfully submitted,

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December 11, 2007

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I hereby certify that I have this day served a copy of **THE DIVISION OF RATEPAYER ADVOCATES' POST-WORKSHOP COMMENTS IN RESPONSE TO THE ASSIGNED COMMISSIONER'S RULING ON DYNAMIC PRICING ISSUES"** in **A.06-03-005** by using the following service:

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